UNIVERSITY OF HAWAI'I COMMUNITY COLLEGES

PROPOSAL TO INITIATE, MODIFY OR DELETE A COURSE

1. TYPE OF ACTION
   A. Addition [ ] Regular [ ] Experimental [ ] Other (specify)
   B. Deletion [ ] Regular [ ] Experimental [ ] Other (specify)
   C. Modification [ ] in credits [X] in title [X] in number or alpha [X] in prerequisites [ ] Other (specify)

2. NEW ALPHA, NUMBER AND TITLE: BIOL 101 Biology and Society
3. CREDITS 4

4. OLD ALPHA, NUMBER AND TITLE: SCI 121 Introduction to Science
5. CREDITS 4

6. NEW CATALOG DESCRIPTION

7. PREREQUISITES
   see attached

8. STUDENT CONTACT HOURS PER WEEK
   Lecture 3 Lecture/Lab ___ Lab 3
   Other (specify) ______

9. PROPOSED DATE OF FIRST OFFERING
   FALL 1997

10. THIS COURSE [X] IS REQUIRED [ ] IS AN ELECTIVE FOR THE WCC PROGRAM/CORE
    (Please specify) (Circle : prop.)
    [X] CAN FULFILL WCC Natural Science Group 1 plus Lab REQUIREMENT
    (Please specify)

11. THIS COURSE [ ] INCREASES [ ] DECREASES [X] MAKES NO CHANGE IN NUMBER OF CREDITS REQUIRED FOR THE PROGRAM/CORE

12. SIMILAR COURSES OFFERED ELSE WHERE: **see attachment for other colleges
    Colleges(s):
    UHM
    BIOL 101 & BIOL 101L
    UHH
    BIOL 101 & BIOL 101L
    HonoCC
    SCI 121

13. THIS COURSE IS
   [X] ALREADY ARTICULATED [ ] APPROPRIATE FOR ARTICULATION [ ] NOT YET APPROPRIATE FOR ARTICULATION
   (Provide details of existing or desired articulation (date, college(s), purposes, pre-major or major, etc.)
   **see attached Course Articulation Form

14. REASON FOR INITIATING, MODIFYING OR DELETING COURSE OR OTHER PERTINENT COMMENT:
   1. New course alpha, no., title matches those for UHM.
   2. Prerequisites will ensure students are properly prepared for success in this 100 level course.

REQUESTED BY: 

APPROVED BY: 

CCCMM #6100
(Amended for WCC use Sept. 1992)
BIOL 101 Biology and Society

7. PREREQUISITE

MATH 25 or equivalent, and eligibility for placement in ENG 100, or consent of instructor.
12. SIMILAR COURSES OFFERED ELSE WHERE continued:

<table>
<thead>
<tr>
<th>College(s):</th>
<th>Alpha, Number, Title:</th>
</tr>
</thead>
<tbody>
<tr>
<td>KapCC</td>
<td>BIOL 101 &amp; BIOL 101L</td>
</tr>
<tr>
<td>KauCC</td>
<td>SCI 121 &amp; SCI 121L</td>
</tr>
<tr>
<td>LCC</td>
<td>SCI 121</td>
</tr>
<tr>
<td>HawCC</td>
<td>BIOL 101 &amp; BIOL 101L</td>
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<tr>
<td>MCC</td>
<td>SCI 121</td>
</tr>
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</table>
# Levels of Review of Course Proposals at WCC

<table>
<thead>
<tr>
<th>Signatures</th>
<th>Dates</th>
</tr>
</thead>
</table>
| 1. Subject Area (one or more instructors in the area) | 9-12-96  
  | Lydell E. Noble                  | 9-12-96  
  | Joseph E. Crotte                | 9-12-96  |
| 2. Department                   | 10-15-96 |
  | Jacqueline Moley                |          |
  | Department Chairperson          |          |
  | Was this course discussed in a dept. mng. | 10-15-96 |
| 3. Division                     | 10-23-96 |
  | Assistant Dean of Instruction   |          |
| 4. Curriculum Committee Review  |          |
  | Approved X                      |          |
  | Disapproved                     |          |
  | Reason:                         |          |
  | Daniel Deming                   | 11/26/96 |
  | Curriculum Committee Chairperson|          |
COURSE ARTICULATION FORM

ORIGINATING CAMPUS: WCC

DATE SUBMITTED: ________________

COURSE ALPHA & NUMBER: BIOL 101

SEMESTER CREDITS: 4

COURSE TITLE: BIOLOGY AND SOCIETY

DATE OF OUTLINE: (Fall or Spring) Fall Year 1997

(** Representative outline, no multiple syllabi, please.)

1. Articulation committee to review this course:

   A. Standing Committees
      Written Communication [ ]
      Mathematical & Logical Thinking [ ]
      World Civilizations [ ]
      Languages [ ]
      Arts & Humanities [ ]
      Natural Science [X]
      Social Science [ ]

   B. Special Discipline/Program Committee [X] Biology
      Specify discipline/program

Campus with which this course should be articulated (special articulation only):

   UH Manoa [X]    UH Hilo [X]    Community Colleges [X]    UH West Oahu [ ]

2. In the opinion of the originating campus, this course is equivalent to the following and/or meets the criteria for the indicated core categories:

<table>
<thead>
<tr>
<th>Receiving Campus</th>
<th>Equivalent Course (Alpha and Number)</th>
<th>Core Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>UH Hilo</td>
<td>BIOL 101/101L</td>
<td>Natural Sciences</td>
</tr>
<tr>
<td>UH Manoa</td>
<td>BIOL 101/101L</td>
<td>Natural Sciences, Group 1</td>
</tr>
<tr>
<td>UH West Oahu</td>
<td>no course</td>
<td>Math &amp; Nat. Sci.</td>
</tr>
<tr>
<td>Hawaii CC</td>
<td>BIOL 101/101L</td>
<td>Natural Sciences</td>
</tr>
<tr>
<td>Honolulu CC</td>
<td>SCI 121</td>
<td>Natural Sciences, Group 1</td>
</tr>
<tr>
<td>Kapiolani CC</td>
<td>BIOL 101/101L</td>
<td>Natural Sciences</td>
</tr>
<tr>
<td>Kauai CC</td>
<td>SCI 121/121L</td>
<td>Natural Sciences, Group 1</td>
</tr>
<tr>
<td>Leeward CC</td>
<td>SCI 121</td>
<td>Natural Sciences, Group 1</td>
</tr>
<tr>
<td>Maui CC</td>
<td>SCI 121</td>
<td>Natural Sciences</td>
</tr>
</tbody>
</table>

3. Notes

Revised 1/29/93
ARTICULATED COURSE
CHANGE IN ALPHA / NUMBER / TITLE

OLD COURSE

Course (alpha & number): SCI 121
Title Introduction to Science: Biological Science

REVISED COURSE

Course (alpha & number): BIOL 101
Title Biology and Society

Semester and Year when the revised course was/will be first offered:
Fall 1997

Reason for the change in Alpha and/or Number: To reflect similar changes made at U.H. Manoa.

Note: A current outline of the renumbered course must be submitted with this form. Undated outlines are not acceptable.

I certify that this course has had its alpha, number and/or title changed, but that it is substantially the same course as the course that was reviewed and approved for articulation.

Campus WCC

Certifying authority
Signature and Title Assistant Dean Date 3-7-97

SUBMIT TO: UCA Clearinghouse, Attn: John Muth Chancellor's Office for CC, 2327 Dole Street.
WCC FORM FOR COURSE MODIFICATIONS

Course BIOL 101 Submitted by Dave Krupp Date

1. What change is proposed in the course? Provide specific information comparing both the "new" and "old" course.
   A. Change in course alpha, no., & title from SCI 121 (Intro to Sci: Biol. Sci.) to BIOL 101 (Biology and Society)
   B. Add prerequisites in math (MATH 25) and English (eligibility for placement into ENG 101)

2. What is the rationale for the change?
   A. Course alpha, no., & title changes reflect similar changes made for this course at U.H. Manoa
   B. Prerequisites will guarantee that students enrolling in BIOL 101 will have the greatest chances for success in this 100 level course.

3. Is the change substantive enough to require a change in course identification? If so, explain thoroughly.
   no

4. Is the course articulated with any 4-year program? yes.
   If yes, give details of the agreement(s) and explain any impact the proposed modifications may have on articulation.
   Course meets core requirements at all campuses.
   Course is required by the College of Education.
   The changes proposed will not affect current articulations.

5. Provide details of any additional staff, equipment, facilities, library/media material, faculty preparation and other financial considerations that would be required to implement this course modification. What has been done to provide for these additional costs? Who will teach the course? Is additional preparation needed?
   NA

6. Will this course modification result in any alterations in the number of hours required to attain a certificate or degree? no
   If yes, provide details and justification for these alterations.

7. If the course is renumbered to 100 or above, does it meet the criteria for transfer level courses? (See attached criteria for transfer courses.)
   yes
WCC FORM FOR TRANSFER COURSES

(To be completed for articulation with any 4-year UH campus)

Course: BIOL 101  Submitted by Dave Krupp  Date

1. List the counterpart to this course on any 4-year UH campus. Describe the relationship between the course and any related baccalaureate program area.
   - UHM  BIOL 101/101L
   - UHH  BIOL 101/101L

2. Is this course taught or accepted by major accredited colleges or universities? Give one or two examples.

3. Please attach a complete course outline, if you have not done so already. Your course outline should address all the items listed in the Guidelines for Course Outlines.
WINDWARD COMMUNITY COLLEGE
OUTLINE OF COURSE OBJECTIVES

COURSE NAME: Biology and Society

COURSE ALPHA: BIOL 101

CREDIT HOURS: 04

CATALOG DESCRIPTION:

Historical development of scientific concepts, characteristics, and interaction of science and society from the perspective of biological sciences. Lecture/laboratory/field trip course designed for non-science majors. (3 hrs lect; 3 hrs lab)

REQUIREMENTS COURSE SATIFIES:

Meets general education core requirements for a biological science course (Natural Science Group 1). Also fulfills requirement for a science laboratory course.

PREREQUISITES:

MATH 25 or equivalent preparation

Eligibility for placement in ENG 100

RECOMMENDED BASIC SKILL LEVELS:

none

ACTIVITIES REQUIRED AT SCHEDULED TIMES OTHER THAN CLASS TIMES:

none

INSTRUCTOR: Dr. David Krupp

OFFICE: Hāloa 108

TELEPHONE: 235-7316 (WCC) or 236-7437 (HIMB)

EFFECTIVE DATE: Fall 1997
COURSE GOALS

Upon completion of this course, you should:

1. understanding how the process of science explains phenomena in the natural universe;
2. have some knowledge about the historical development of biological science and the contributions made by some of the significant personalities in biological science;
3. be aware of the diversity of life and the natural processes that have produced this diversity;
4. understand the interaction between human society and biological science;
5. be able to communicate fundamental biological concepts.

COURSE OBJECTIVES

Upon completion of this course, you should be able to:

1. describe the characteristics and philosophies of general and biological science;
2. describe the scientific method of inquiry, provide examples of its use, and demonstrate this method through written documentation of class research projects;
3. collect, reduce, analyze, interpret, and present biological data;
4. demonstrate your ability to use some of the standard tools of the biological scientist, such as microscopes, scales, and other measuring tools;
5. outline some of the significant historical events in biological science and describe the significant contributions made to biological science by specific scientists;
6. describe and discuss the major integrating principles of biological science, including but limited to the following: evolution, the classification of living things, cell structure and function, classical genetics, molecular genetics, developmental biology, and ecological principles;
7. describe and discuss the characteristics that distinguish the five kingdoms of life and the major divisions/phyla that comprise each of these kingdoms;
8. discuss biological issues of significance to human society, such as creationism versus evolution, AIDS, genetic engineering, abortion, animal rights, and environmental issues;
9. communicate biological phenomena and principles using appropriate technical vocabulary.

MODE OF INSTRUCTION

The previously described objectives will be achieved through the aid of the following learning activities:

1. assigned readings;
2. class lectures and demonstrations;
3. composing short essay assignments;
4. participation in formal laboratory activities and written laboratory reports.
The material presented in all modes of instruction will be of an introductory nature but sufficient in content to allow serious study by the interested student. Assigned readings will serve to provide background and supplemental information to provide a broad base for a basic study of biology. Class lectures will build upon this base, helping to focus the student to some of the more important details. Lecture study guides will be provided to help students focus upon the more significant details from the lecture and text. Laboratory activities and assignments will be utilized to give students "hands-on" experiences primarily with the scientific method and the diversity and classification of living things.

EVALUATION OF OBJECTIVE ACHIEVEMENT

EXAMINATIONS. The student will take 1 midterm examination (100 points) and a noncumulative final examination (100 points) to demonstrate understanding of information presented during lectures and laboratories.

QUIZZES. The student will take a total of 12 quizzes (10 points each) administered ONLY during the first 10 minutes of the laboratory meetings. These noncumulative quizzes will cover information presenting during both lecture and laboratory sessions. Of these 12 quizzes, only the 10 best scores will be included in the student's point total (100 points total). NO MAKE-UP QUIZZES FOR ANY ABSENCES (EVEN RESULTING FROM LEGITIMATE ILLNESS) WILL BE ADMINISTERED.

SHORT ESSAY ASSIGNMENTS. During the course of the semester, students will be assigned 10 essay questions (10 points each). Each essay response should be typed (normal fonts and double-spaced) grammatically correct and exhibit a logical organization. Its content should be objective and supported by factual information. While each essay will be evaluated primarily on content, rather than on quantity, I expect that each essay will require one to three typed (10-12 pt. font) double-spaced pages. LATE ASSIGNMENTS RECEIVED WITHIN ONE WEEK OF THE DUE DATE WILL BE ASSESSED AN AUTOMATIC PENALTY OF 1.5 POINTS. ASSIGNMENTS WILL NOT BE ACCEPTED IF SUBMITTED MORE THAN ONE WEEK AFTER THE DUE DATE.

LABORATORY ASSIGNMENTS. The student will complete a total of 14 written laboratory assignments (10 points each). Each assignment must be completed and turned in no later than the first laboratory meeting after the assignment was given (140 points total). LATE ASSIGNMENTS RECEIVED WITHIN ONE WEEK OF THE DUE DATE WILL BE ASSESSED AN AUTOMATIC PENALTY OF 1.5 POINTS. ASSIGNMENTS WILL NOT BE ACCEPTED IF SUBMITTED MORE THAN ONE WEEK FOLLOWING THE DUE DATE.

LABORATORY ATTENDANCE AND PARTICIPATION. The student will attend and actively participate in all laboratory activities (60 points total). Because of the difficulties in setting up laboratory materials, students missing a regularly scheduled laboratory activity may be given an alternative assignment related to the activity. HOWEVER, STUDENTS MISSING MORE THAN TWO SCHEDULED LABORATORY SESSIONS WILL NOT RECEIVE CREDIT FOR THE COURSE.

METHOD OF GRADING

The assignment of points will be according to the following protocol:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture Examinations</td>
<td>200</td>
</tr>
<tr>
<td>Quizzes</td>
<td>100</td>
</tr>
<tr>
<td>Essay Assignments</td>
<td>100</td>
</tr>
<tr>
<td>Laboratory Assignments</td>
<td>140</td>
</tr>
<tr>
<td>Laboratory Participation</td>
<td>60</td>
</tr>
<tr>
<td>TOTAL</td>
<td>600</td>
</tr>
</tbody>
</table>
Letter grades will be assigned as follows:

A ------ 90% or above in total points and missing no more than six hours of laboratory activities;
B ------ 80-89.9% of total points and missing no more than six hours of laboratory activities;
C ------ 65-79.9% of total points and missing no more than six hours of laboratory activities;
D ------ 55-64.9% of total points and missing no more than six hours of laboratory activities;
F ------ Below 55% of total points, or missing more than six hours of laboratory activities, or informal or incomplete official withdrawal from course;
I ------ Incomplete; given at the INSTRUCTOR'S OPTION when student is unable to complete a small part of the course because of circumstances beyond his or her control. It is the STUDENT'S responsibility to make up incomplete work. Failure to satisfactorily make up incomplete work within the appropriate time period will result in a grade change for "I" to the contingency grade identified by the instructor (see catalog);
CR ---- 65% or above in total points and missing no more than six hours of laboratory activities; the student must indicate the intent to take the course as CR/NC in writing by the end of the 10th week of classes (see catalog).
NC ---- Below 65% of total points or missing more than six hours of laboratory activities; for BIOL 101, this grade only available under the CR/NC option (see above and see catalog);
N ------ NOT GIVEN BY THIS INSTRUCTOR EXCEPT UNDER EXTREMELY RARE CIRCUMSTANCES (e.g., documented serious illness or emergency that prevents the student from officially withdrawing from the course); never used as an alternative for an "F" grade;
W ------ Official withdrawal from the course after the third week and prior to the end of the 10th week of classes (see catalog).

NO RETESTS will be given. A student missing the midterm exam because of an illness or legitimate emergency may take a make-up exam only during the FIRST class meeting to which the student returns. In such a circumstance, the student should make every reasonable attempt to contact the instructor before the exam is administered to the class (or as soon as possible). While make-up exams will cover the same content area as a missed exam, the exam format and specific questions may be different.

The instructor may announce extra credit options at various times during the course. THE INSTRUCTOR IS NOT OBLIGATED TO ACCEPT PROJECTS FOR EXTRA CREDIT.

Waiver of minimum level of achievement will be given only in unique situations at the instructor's discretion.

Students involved in academic dishonesty will receive an "F" grade for the course.

STUDENT RESPONSIBILITIES

Students should carefully review the attached sheet detailing inherently dangerous activities of this course and sign the appropriate U.H. Assumption of Risk and Release and Medical Consent forms.

Students are expected to attend all lectures and laboratory activities, participate in all activities, and complete all course assignments on time.

Students are expected to be prepared in advance when they arrive to class and laboratory sessions. Being prepared includes the following: having already read text materials (e.g., textbook readings, laboratory instructions, and handouts) assigned for that day's activities; bringing required work materials (e.g., textbook, handouts, writing supplies, etc.); and wearing clothing appropriate for the activity.

Any changes in the course schedule, such as examination dates, deadlines, etc., will be announced ahead of time in class. It is the student's responsibility to be informed of these changes.
It is the student's responsibility to be informed about deadlines critical to making registration changes (e.g., last day of erase period and last day for making an official withdrawal.

The student should understand that "INTRODUCTORY" DOES NOT MEAN "EASY". While the instructor assumes that students enrolled in BIOL 101 have little or no science backgrounds, the students should expect a level of difficulty comparable to other 100-level science classes. When difficult concepts and detailed information are presented, it is the student's responsibility to take the appropriate steps to learn and understand these concepts and information.

Science courses at W.C.C. generally require two to three hours of independent private study time for each hour in class (depends upon the student's science background). It is the student's responsibility to allocate the appropriate time needed for study in an environment conducive to quality study. The student must budget time efficiently and be realistic about all personal and professional commitments that consume time.

HOW TO SUCCEED IN THIS CLASS

Understanding biological science involves understanding many difficult concepts and vocabulary, not just knowing facts. You should know that the details to these concepts are important. In addition, you will be introduced to hundreds of new words. In some cases, words that are familiar to you in a context other than biology will be introduced to you in the context of biology. You will need to understand and use these terms in a biological science context.

While you will be given study guides, you will not succeed in this class unless you take your own careful lecture notes and read the corresponding material in the textbook. As soon as possible (best if you do it the same day), copy over your lecture notes filling in gaps and missing information by referring to the study guides and textbook. You should carefully review these rewritten lecture notes as often as possible. In addition to reviewing these notes before a quiz or exam, it would be useful to try to rewrite these notes from memory.

In addition to copying over your lecture notes, your study activities should include drawing your own labelled diagrams or graphs that illustrate important biological phenomena (e.g., the internal structure of the cell, the stages of cell division, or the population growth curve). These diagrams need not be works of art, but should clearly illustrate significant information. Before a quiz or exam, it would be useful to redraw these labelled diagrams and graphs from memory.

Make flashcards for each new vocabulary word you learn (refer to study guides provided for a list of terms). On one side write the word. On the other side write the appropriate biological science definition for the word. Test your ability to provide the right definition as often as possible. Practise using the word to explain biological concepts.

Write out answers to all of the study guide questions as though you were required to turn them in. Allow someone else to read your answers and give you feedback. Read someone else's answers and provide constructive feedback.

Read the textbook materials corresponding to a particular lecture (or lab activity) before and after that lecture. Review this material before quizzes and exams.
TEXTBOOK AND OTHER ASSIGNED INSTRUCTIONAL MATERIALS

The required textbooks are:


Other reading assignments may be found on reserve in the library or may be provided in class.
## LECTURE TOPICS

<table>
<thead>
<tr>
<th>Science as a Way of Knowing</th>
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<tbody>
<tr>
<td>Interpreting the Universe and How We Fit into It</td>
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<tr>
<td>Aristotle and Greek Rationalism</td>
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<tr>
<td>Western Science During the Middle Ages</td>
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<tr>
<td>The Revolution in Science</td>
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<tr>
<td>Fossils and the Discovery of Earth History</td>
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<tr>
<td>Darwin's Evolutionary Paradigm</td>
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<tr>
<td>The Evidence for Evolution and its Mechanisms</td>
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<tr>
<td>Life Over Time</td>
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<tr>
<td>Pangenesism, Cells and Chromosomes</td>
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<tr>
<td>Mendelian Genetics</td>
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<tr>
<td>Beyond Mendel</td>
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<tr>
<td>Molecular Genetics</td>
</tr>
<tr>
<td>Descriptive Embryology</td>
</tr>
<tr>
<td>Control of Development</td>
</tr>
<tr>
<td>Ecological Principles and Environmental Issues</td>
</tr>
</tbody>
</table>

## LABORATORY TOPICS

<table>
<thead>
<tr>
<th>The Scientific Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making Measurements and Calculations</td>
</tr>
<tr>
<td>Summarizing, Presenting and Analyzing Data</td>
</tr>
<tr>
<td>Using the Microscope and Observing Cells</td>
</tr>
<tr>
<td>Fossils: Evidence of Past Life</td>
</tr>
<tr>
<td>Kingdom Monera</td>
</tr>
<tr>
<td>Kingdoms Protista and Fungi</td>
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<tr>
<td>Seaweeds, Mosses and Ferns</td>
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<tr>
<td>Gymnosperms and Angiosperms</td>
</tr>
<tr>
<td>Animal Body Plans and Classification I</td>
</tr>
<tr>
<td>Animal Body Plans and Classification II</td>
</tr>
<tr>
<td>Mendelian Genetics I</td>
</tr>
<tr>
<td>Mendelian Genetics II</td>
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<tr>
<td>Reproduction and Development</td>
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